# Calamus Reservoir
# 2009 Fall Gill Net Sampling Results

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The following charts and text is the summary of the 2009 fall gillnet fish sampling conducted at Calamus Reservoir on October 4-5. Six gill nets were set in overnight. To better evaluate the fish populations in the lake, netting effort was increased in 2009 from previous years and nets were set in the mid and lower sections of the lake. The water temperature was 55 F at the time of sampling, however, a strong southeast wind developed overnight which may have affected fish movement thus catch rate. However, fish population surveys are conducted using standardized procedures to provide the best data possible for annual comparisons.

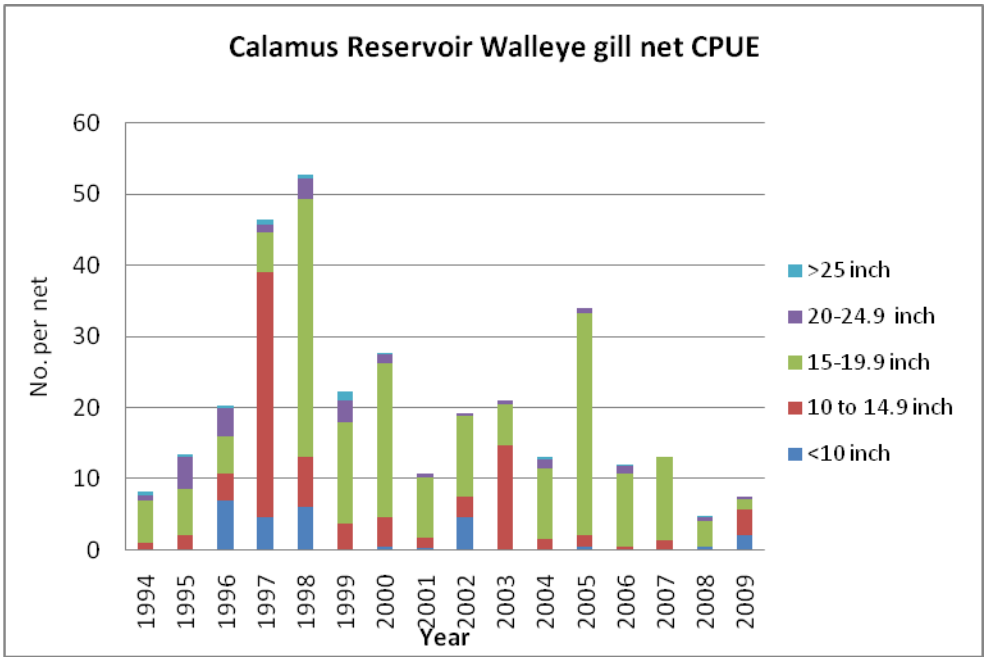
A brief explanation accompanies each species catch rate chart. For comparison purposes, sampling data is shown from 1994 to the present. In this report, reference will be made to Calamus Reservoir creel surveys. Angler creel surveys were conducted in 1998, 2000, 2001, 2003, 2006 and 2009. Angler creel surveys will now continue annually through 2013. A separate creel report for the 2009 data will be presented on the Nebraska Game and Parks web site.

Two new fishing regulations took effect at Calamus Reservoir in 2009. The walleye harvest regulation now consists of an 18-inch minimum length limit with 1 fish allowed in the daily bag between 15 and 18 inches in length. The remaining of the 4 fish bag limit must be over 18 inches with only 1 allowed over 22 inches. This is the same regulation that has been successful at Merritt Reservoir. The other regulation change allows for the harvest of 5 channel catfish in the daily bag, a decrease from the 10 fish previously allowed. Walleye stocking strategy changed from fingerling to fry stocking in 2009 in an attempt to boost recruitment and year-class strength. No wipers were available for stocking in 2009.

**Walleye**

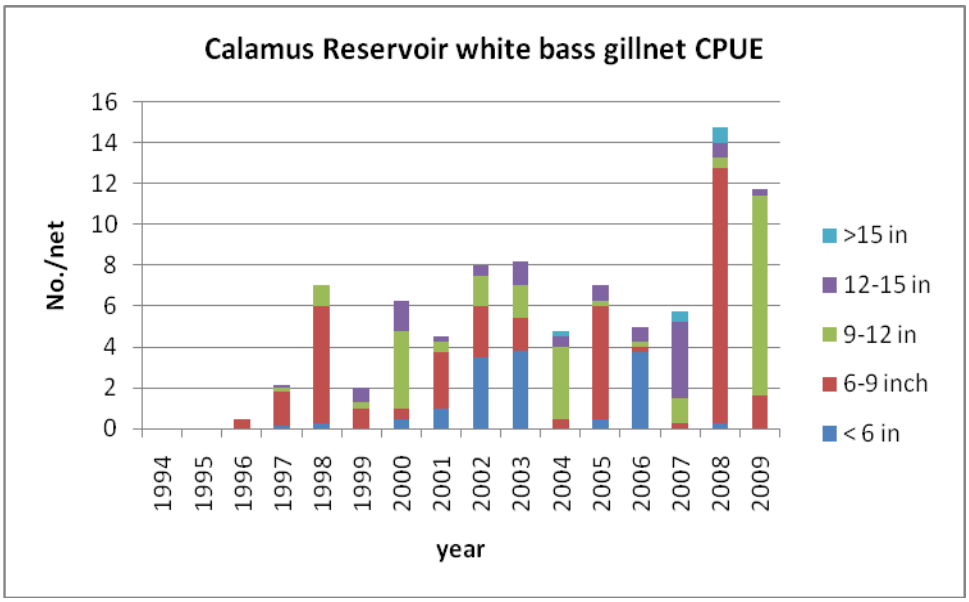
Walleye catch-per-unit-effort (cpue) increased by nearly 60 % over the 2008 catch but remains below the previous 5 year mean catch rate of 14.2 and the previous ten year mean catch rate of 16.2. The most abundant size class in the sample were 10-15 inch fish followed by those less than 10 inches. The fish less than ten inches are the result of the April fry stocking and is the best catch of young-of-the-year (YOY) fish since 2002. The 2009 yoy catch of 2 per net is above the 5 year mean yoy catch rate of 0.2 and the ten year mean of 0.62. It is anticipated that the fry stocking will produce more young-of-the-year (yoy) fish than fingerling stocking and boost recruitment. Recruitment rates must remain high in order for the current walleye regulation to work as planned. Walleye harvest, as measured by a 2009 angler creel survey, was the highest recorded of any creel survey conducted at the Calamus. In spite of a poor 2008 gill net catch in the fall sample, anglers caught nearly 26,000 walleye and harvested nearly

16,000 of those caught. Anglers did take advantage of the new regulation which allowed 1 fish in the bag between 15 and 18 inches in length. However, only 25% of the fish harvested were in this size group. The vast majority of walleye harvested were over 18 inches. There were no creel surveys conducted at Calamus in 2007 or 2008 so that leaves only speculation as to why the harvest of larger fish occurred. Anecdotal information indicates fishing pressure was low in 2007 and particularly low in 2008. This would lead to a buildup of larger fish in the population, although the 2008 gill net catch did not reflect a large increase in catch of 18 inch and larger walleye. However, the majority of the walleye sampled in gill nets in 2008 were over 18 inches. A second factor that may have led to good walleye fishing was a late winter shad die-off that occurred. The lack of suitable prey in the lake may account for the "bite" that occurred in 2009. Predictions for 2010 are for a reduced walleye bite and a decrease in walleye harvest.



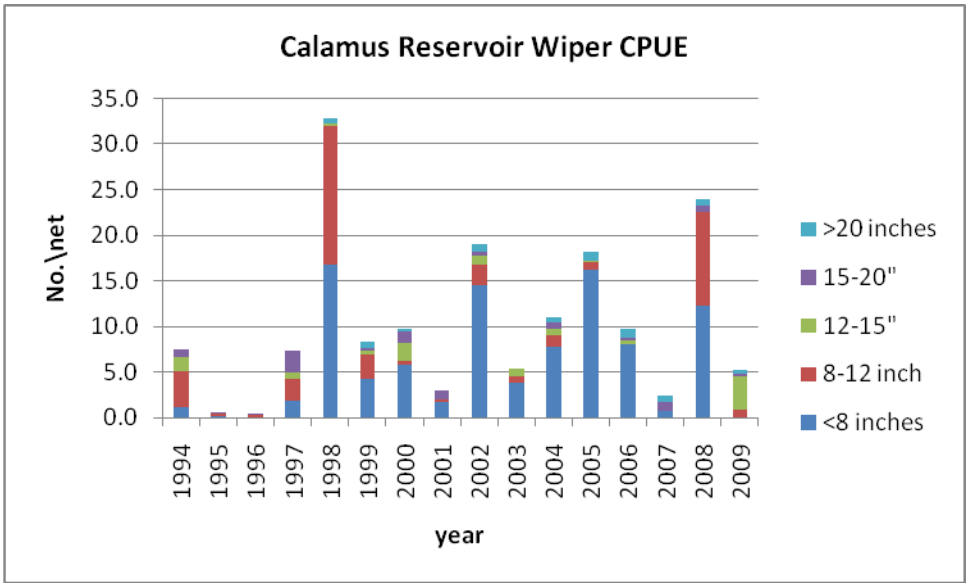
**White Bass**

White bass had the second highest catch recorded in fall gill net surveys with only the 2008 catch higher. The 2009 cpue of 11.7 was well above the previous 5 year mean cpue of 7.5. As expected, the 6-9 inch white bass from 2008 have grown into the 9-12 inch range in 2009, thus reaching a size acceptable to anglers. This increase in harvestable-size white bass resulted in the highest white bass harvest of any creel survey years. Nearly 11,000 white bass were harvested by anglers in 2009 with another 21,516 caught and released. Since our gill net survey is conducted in October, our catch indicates another good year for white bass angling at the Calamus in 2010. Low numbers from the 2009 year class were collected.



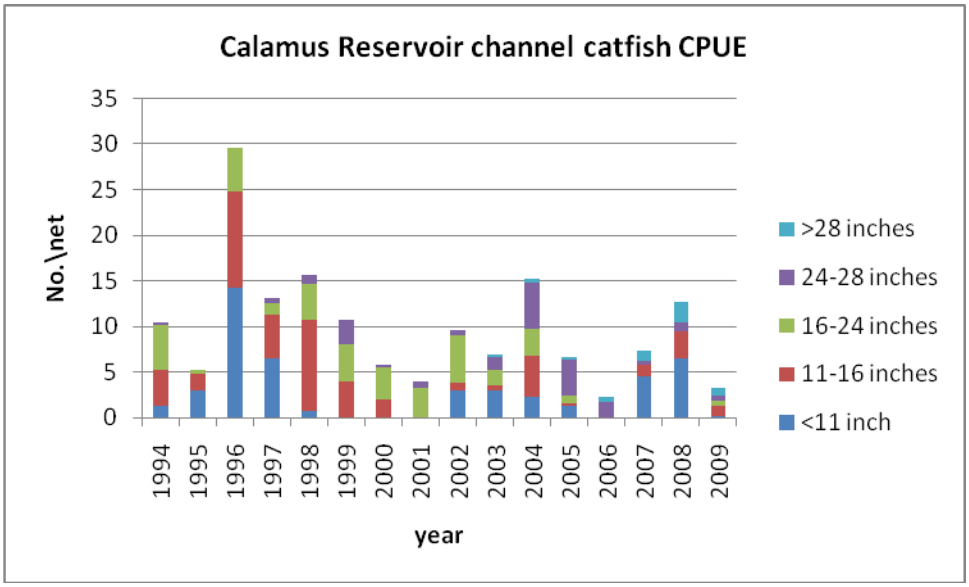
**Wipers (white bass x striped bass hybrid)**

Wiper gill net cpue of 5.2 in 2009 was down considerably from the 24 per net sampled in 2008 and was well below the previous 5 year average of 13.1. No wipers were available for stocking in 2009 and the lack of yoy fish is reflected in the gill net catch. Gill net sampling for wipers (and white bass for that matter) can be a hit-and-miss affair because of their tendency to school. This also is reflected in the up and down pattern to the gill net long-term data set. The 2008 October gill net survey indicated high numbers of wipers. Anglers harvested more wipers in the 2009 creel than in any of the other 5 creel surveys. Over 4,000 wipers were estimated harvested in 2009 with another 7,531 released. Only the 2000 creel survey exceeded this total catch. Wiper fishing should be fair in 2010 with larger fish caught.



**Channel catfish**

The numbers of channel catfish collected were low across all size groups in 2009. The gill net cpue of 3.1 was well below the previous 5 year mean cpue of 8.8. However, catfish sampling on a large reservoir can vary as seen in the long term data set. If the 2009 angler catch of catfish is any indication, numbers were indeed somewhat lower. An estimated 2,936 channel catfish were caught by anglers in 2009 with an estimated 888 harvested. This was the second lowest total catch recorded for catfish in the angler surveys with only the 2006 creel survey showing a lower catch. This is somewhat surprising since the 2008 gill net sample indicated good numbers of fish. Based on netting samples, there are some very large catfish available to anglers at the Calamus. The intent of the daily bag reduction was to create a better quality catfish population and potentially boost numbers. Angler creel surveys over the next four years will help evaluate the channel catfish population under the new daily bag limit.



**Gizzard Shad**

Overall gizzard shad numbers decreased from2008 but the gill net cpue still indicates a rather high number of adult shad. A major shad die-off occurred in the winter of 2008-2009. Although few yoy shad were collected in the fall netting, anecdotal information indicated fair shad production in 2009. A build-up of larger, adult shad can lead to poor production of young shad, increased competition with sport fish species, and inhibit recruitment of sport fish because of this competition for food and space. The ideal gizzard shad scenario is for high reproduction of young that sport fish feed on and then a high winter mortality with low survival to adult sizes. Prior to 2008, this perfect scenario appeared to be occurring at Calamus. Hopefully, a cold winter will reduce the adult shad population in 2010.